Poster Presentation – Parasitic Infections

PP-164 A case of anisakiasis on stomach and colon mimicking submucosal tumor

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Introduction: Anisakiasis is the human infection by third stage larvae of *Anisakis spp.*. We report a case of anisakiasis on stomach and colon mimicking submucosal tumor (SMT).
Case Description: A 60-year-old man visited to outpatient clinic with abdominal pain and vomiting. The symptom had started within one hour after eating sliced raw flatfish (sashimi) four days ago. Upper Endoscopy revealed generalized gastric mucosal edema with erythema and erosions. Furthermore, numerous worms penetrating into gastric mucosa were noted (Fig. 1). Fifty-one worms, 0.5∼3cm in length, were extracted by forcep endoscopically. The patient had a quick recovery. After 3 week follow-up endoscopy, multiple SMT-like lesions (1∼3.5cm sized) were noted on corpus (Fig. 2).

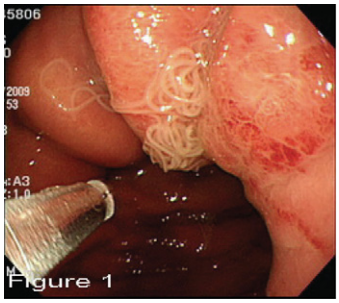
Figure 1

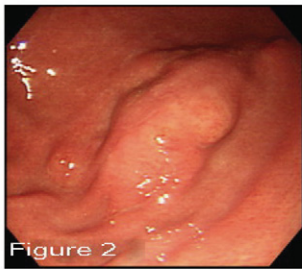
Figure 2

And, also, around 1cm sized SMT-like lesions were found on the hepatic flexure of colon. Histopathological examination revealed marked eosinophilic infiltration. In conclusions, early endoscopic diagnosis and intervention possibly prevents the unnecessary surgery and complications of late diagnosis.

PP-165 Characterization of *Entamoeba histolytica* and *Entamoeba dispar* in fresh stool by PCR

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Background: Microscopy still remains the primary method for the diagnosis of amebiasis; however, it does not allow for the differentiation of *Entamoeba dispar* from *Entamoeba histolytica*. The accuracy of this method is highly dependent on the skills of the technician. Furthermore, microscopy has been shown to be less sensitive and less specific compared to other methods such as polymerase chain reaction (PCR). Several PCR-based methods have been described and used successfully for this purpose, but the methods for DNA extraction from stool samples are usually time-consuming and problematic due to inhibitory factors in feces.
Methods: The aim of this study was to differentiate these two species by PCR directly from fresh stool. From a total of 1700 stool samples collected and examined by microscopy, 22 samples (1.3%) were microscopically positive for the *E. histolytica*/*E. dispar* complex. The DNA of these samples was extracted directly from fresh stool and PCR was carried out using two sets of species-specific primers from a short tandem repeat (STR) in the D-A locus.
Results: Of these, 21 samples (95.45%) were diagnosed as *E. dispar* and only one sample (4.55%) was found to be *E. histolytica*.
Conclusion: In this study, by improving the DNA extraction from fresh stool, we were able to efficiently differentiate *E. histolytica* and *E. dispar*. To avoid unnecessary treatment of patients not infected with *E. histolytica*, the development of effective techniques, such as direct DNA extraction from stool, is recommended.

PP-166 The role of gadolinium chloride for $CD4^+CD25^+$ regulatory T cells in schistosomiasis granuloma

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Objectives: To determine whether targeting Kupffer cells function using gadolinium chloride ($GdCl_3$) interferes with the $CD4^+CD25^+$ regulatory T cells in schistosomiasis granuloma.
Methods: Six-week-old C57BL/6 female mice were divided three groups, control group,infection with *S. japonicum* cercariae group and infection group injected with $GdCl_3$ through the penile vein (15 mg/kg) twice per week. The number of $CD4^+CD25^+$ T cells was detected using flow cytometry. The number of foxp3 was detected using immunohistochemistry. For the detection of murine IL-4, IL-5, IL-10, TGF-β1 and IFN-γ, a DuoSet ELISA development kit was used.
Results: The number of $CD4^+CD25^+$ T cells and the level of IL-10 decreased in *S. japonicum* cercariae infected mice injected with $GdCl_3$ compare with infection group only. $GdCl_3$ treatment decreased foxp3 production and the number of schistosomiasis granuloma.

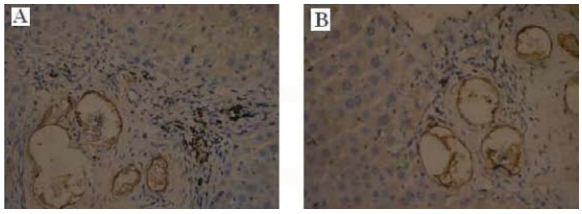

Fig. 1. $GdCl_3$ treatment decreased foxp3 production. A. Infection with *S. japonicum* cercariae; B. infection and injection with $GdCl_3$.

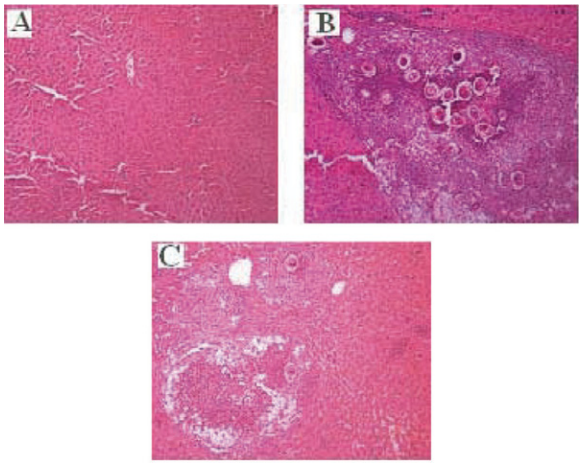

Fig. 2. $GdCl_3$ treatment decreased the number of schistosomiasis granuloma. A. Controls; B. infection with *S. japonicum* cercariae; C. infection and injection with $GdCl_3$.

Conclusion: Targeting kupffer cells function using gadolinium chloride interferes with the $CD4^+CD25^+$ regulatory T cells in schistosomiasis granuloma.